REMARKS

Claims 1-30 are pending in the present Application. Claims 1, 13, 20, 22, 24-26 and 28-30 are written in independent form. By this Amendment, claims 1, 5, 6, 8, 13, 15, 16, 18, 20, 22-26 and 28-30 are amended. Support for the amendments may be found at least at paragraph [0035] of the published Application. Thus, no new matter is added.

I. Objection to the Specification:

The Abstract of the specification is objected to for failing to comport with accepted phraseology. As a Substitute Abstract is provided to overcome the Examiner's concerns, withdrawal of the objection is respectfully requested.

II. Claim Objections:

Claim 20, 22-24, 26 and 27 are objected to for various informalities, such as typographical errors.

As the claims are amended to address the informalities, withdrawal of the objection is respectfully requested.

III. Rejection under 35 USC §101:

Claim 25 is rejected under 35 USC §101 for allegedly being drawn to non-statutory subject matter. Specifically, it is alleged that the claimed "signal" is not a process, machine or composition of matter. As claim 25 is amended to recite statutory subject matter, withdrawal of the rejection is respectfully requested.

IV. Rejection under 35 USC §112:

Claims 1-25 and 29-30 are rejected under 35 USC §112, second paragraph, for allegedly being indefinite for failing got particularly point out and distinctly claim the subject matter Applicant regards as the invention. Specifically, the recitation of "said user" in claims 1, 13, 20, 22 24, 25, 29 and 30 is alleged to be indefinite. It is further alleged that the recitation of "unique features at the distal end of a tool" as recited in claims 5 and 15 is indefinite. Finally, recitation of "etc." in claims 6, 8, 16 and 18 is alleged to be indefinite.

As the claims are amended to remove the alleged indefinite phraseology, withdrawal of the rejection is respectfully requested.

V. Rejection under 35 USC §102:

Claims 1-27, 29 and 30 are rejected under 35 USC §102(e) as being anticipated by US Patent Application Publication 2002/0168618 to Anderson, et al. (Anderson). The rejection is respectfully traversed.

Anderson fails to disclose an interventional procedure simulation system that includes a control unit, the control unit comprising an instruction set for controlling movements of a number of serially arranged and interconnected carriages corresponding to movements of said instruments in said interface unit, as recited in amended independent claim 1, or the similar features of independent claims 13, 20, 22, 24-26. Anderson also fails to disclose simulating an interaction between said nested instruments, independently movable and rotatable, and a surrounding geometry relating to a part of said simulated body part, as recited in claims 29 and 30.

Anderson relates to a computer simulation of image-guided diagnostic and therapeutic procedures. Using the system, a user can interactively manipulate therapeutic catheters, guidewires and other medical devices in real-time while viewing patient-specific medical image data sets in a manner similar to that encountered in a clinical procedure. The simulation system can obtain inputs of various types to mimic an intervention procedure. For example, as shown in FIG. 1 of Anderson, input to the simulator can consist of patient medical history and diagnostic data, such as data obtained from X-ray, MRI, MRA, CT or ultrasound images.

As shown in FIG. 2, a simulated patient (6) houses the tracking and force feedback assemblies. A physician (1) simulates navigation of a catheter by manipulating catheters and guidewires (5). The catheters and guidewires are inserted into the manikin at the manikin interface. One or more monitors (2) can be used to display simulated fluoroscopic and vascular images simulating the internal anatomy of a patient represented by the manikin. In one aspect, 2-D fluoroscopic views are displayed at the same time that 3D geometric models are displayed by system user interfaces. Preferably, the user has the option to adjust fluoroscopic images by one or more of zooming, collimation, rotation, and the like. In combination with 3D volume-rendered images generated using display interfaces described further below, a user can view the vasculature from various positions or angles along x-, y-, and x-axes.

Thus, there is no disclosure in Anderson of controlling movements of a number of serially arranged and interconnected carriages corresponding to movements of said instruments in said interface unit.

Moreover, although Anderson relates to computer simulation of therapeutic procedures, Anderson fails to disclose simulating an interaction between nested instruments. As Anderson fails to disclose each and every feature recited in the rejected claims, withdrawal of the rejection is respectfully requested.

VI. Rejection under 35 USC §103:

Claim 28 is rejected under 35 USC §103(a) as being unpatentable over Anderson in view of US Patent Application Publication 2004/0015070 to Liang. The rejection is respectfully traversed.

The combination of references fails to disclose or suggest, means for generating control signals relating to an interaction between said instruments and a surrounding geometry relating to a part of said simulated body part, said control signals being configured to control movements of a number of serially arranged and interconnected carriages corresponding to movements of said instruments in said interface device, as recited in amended claim 28.

As discussed above, Anderson fails to disclose a, interventional procedure simulation system that includes a control unit, the control unit comprising an instruction set for controlling movements of a number of serially arranged and interconnected carriages corresponding to movements of said instruments in said interface unit.

As Liang fails to overcome the deficiencies of Anderson, claim 28 is not rendered obvious by the combination of references.

CONCLUSION

In view of the above, Applicant earnestly solicits reconsideration and allowance of all of the pending claims.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicant(s) hereby petition(s) for a three (3) month extension of time for filing a reply to the Office Action and submit the required extension fee herewith.

Should there be any matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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